

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

and
STATE OF MAINE
LAND USE PLANNING COMMISSION

IN THE MATTER OF

CENTRAL MAINE POWER COMPANY
Application for Site Location of Development
Act permit and Natural Resources Protection
Act permit for the New England Clean
Energy Connect (“NECEC”)

L-27625-26- A-N
L-27625-TB-B-N
L-27625-2C-C-N
L-27625-VP-D-N
L-27625-IW-E-N

SITE LAW CERTIFICATION SLC-9

REBUTTAL TESTIMONY OF GROUP 4
WITNESS DR. DAVID PUBLICOVER

March 18, 2019

This testimony is presented in rebuttal to pre-filed testimony presented by CMP witnesses Gerry Mirabile, Mark Goodwin and Lauren Johnston (by adoption of Goodwin testimony). Specifically, this rebuttal testimony focuses on the issue of habitat fragmentation (Mirabile and Goodwin sections IV.c.iii). This rebuttal is relevant solely to issues before the DEP.

The testimony of these witnesses reflects the approach taken in the application, and consists of broad general statements, mischaracterization of the surrounding managed forest landscape, incorrect assumptions about the habitat benefits of the new corridor, lack of any assessment of the adverse effects of the new corridor, and unsupported conclusions that are contradicted by the extensive literature on the adverse effects of habitat fragmentation. The

testimony consists of little more than feel-good statements that do not come close to satisfying the burden of proof required by 38 MRSA §486-A.2.

Specific examples include:

- *“CMP sited the NECEC Project to minimize habitat fragmentation. CMP accomplished this by co-locating more than 70% of the new transmission line within or immediately adjacent to existing transmission line corridors, rather than creating a new corridor for the entire transmission line.”* (Mirabile p.11)
- *“Co-location of energy infrastructure is a primary consideration when minimizing impacts to existing land uses and the environment. The proposed development minimizes habitat fragmentation in this manner by utilizing existing transmission line corridors for approximately 73% of the Project.”* (Goodwin p. 15)

The fact that the majority of the line is located within existing corridors is irrelevant to assessing whether the 53.5 miles of new corridor creates an unreasonable adverse effect on the natural environment. The impact of the new corridor would be exactly the same even if it terminated at, and connected to, existing lines without any construction of new co-located line. The fact that additional line was constructed beyond the connection point with the existing corridor does not constitute minimization of impact. By this standard, construction of even more line within existing corridors would constitute even greater minimization.

- *“While this conversion of vegetation from forested to scrub/shrub will favor some species over others, the transmission line corridor will not generally impede the movement or migration of wildlife or plant species.”* (Mirabile p. 12)

The statement that the corridor will not act as a barrier to species movement is made without any supporting evidence and is directly contradicted by other sources. For example,

LUPC's 2010 Comprehensive Land Use Plan states (p. 241)¹, "*Scientists have identified fragmentation of habitat as a serious concern. Roads, utility corridors, certain types of recreation trails, structures and clearings create breaks in the landscape. These breaks can act as barriers to animals and isolate populations of both plants and animals.*" The US Fish and Wildlife Service states² that transmission lines "*act as barriers to wildlife movement and affect migration routes.*" A report by Manitoba Hydro³ stated (p. 49), "*Rights-of-way may displace or impede movements of some birds, marten and other small mammals that inhabit small territories or home ranges in mature forest or that have difficulty crossing nonforested gaps.*" The statement is even contradicted by the Applicant's own application, which states (Section 7.4.1), "*Transmission line corridors present potential direct impacts, as they may affect species movement,...*"

The fact that most species will not be affected, or that the corridor will not "generally" impede species movement, is insufficient. The failure to assess and provide evidence on which species will be adversely affected constitutes a serious flaw in the application.

- "*CMP's vegetation management practices... establishes areas of dense shrubby vegetation and taller vegetation where topographic conditions allow (e.g., steep ravines), thereby providing a vegetation bridge for wildlife movement across the NECEC corridor.*" (Goodwin p. 17)

¹ LUPC. 2010. Comprehensive Land Use Plan. Maine Department of Agriculture, Conservation and Forestry, Land Use Planning Commission, Augusta, ME.

² See <https://www.fws.gov/ecological-services/energy-development/electric-transmission.html>.

³ Manitoba Hydro. 2010. Fur, Feathers, Fins & Transmission Lines: How Transmission Lines and Rights-of-Way Affect Wildlife, 3rd Edition.

Neither the application nor the witness's testimony provides any information as to where or to what extent such topographic conditions will allow taller vegetation to be maintained.

Without such information there is no factual basis for this statement.

- *“CMP's vegetation management practices require riparian buffers, ranging from 75 to 100 feet in width measured from the top of bank, to be maintained at all stream crossings in a manner that will allow taller non-capable vegetation to persist, promoting the movement of wildlife across the corridor and increasing habitat connectivity in these areas.”* (Goodwin p. 17)

Mr. Goodwin's Exhibit 3-I provides a diagrammatic representation of how vegetation will be managed within the riparian buffer zones. The diagram makes clear that even though slightly taller vegetation will be maintained outside of the wire zone, capable species (i.e. trees) will be removed and the retained vegetation will be considerably shorter than the surrounding forest. While these buffers may allow for movement of many species across the corridor, they are insufficient to provide habitat for species that avoid areas without forest cover of adequate height and density, such as marten.⁴ There is no discussion of which species may find these buffers inadequate. (In fact, there is no reference to marten, the primary umbrella species associated with mature forest habitat, anywhere in either Application Chapter 7 or CMP's pre-filed testimony.)

- *“In many cases, edge effect results in greater species diversity, and greater population density of certain species, than that observed within individual habitats.”* (Mirabile p. 12)

⁴⁴ See pre-filed testimony of David Publicover (p. 13)

While true, this statement completely ignores the context of which species benefit and which species do not. The idea that the greater species diversity in edge habitats constitutes a benefit to wildlife is outmoded and contradicted by current understanding of the adverse impacts of forest edges (especially permanent high-contrast edges such as will be created and maintained by the corridor).

For example, Matlack and Litvaitis (1999, p. 210-211) ⁵state, “*For decades, forest managers emphasized edge creation in response to the observation that some forms of wildlife (notably popular game species) were abundant at edges. Now, however, edge habitat is recognized as being incompatible with the requirements of many forest species, and the proliferation of forest edges has threatened the diversity of many forest communities.*” They also state (p. 222), “*Protection of most forest species is best served by uncut forest, well away from the peculiar dynamics of human-generated forest edges.*” Hunter (1990, p. 107)⁶ notes that “*Some wildlife biologists have pointed out that even if edges are zones of high diversity and density, this does not necessarily make them ideal wildlife habitat.*”

The Applicant completely fails to provide any assessment of which species may be adversely affected by the creation of extensive permanent edge. This is critical information; Pfeifer (2017)⁷ found that species that avoided edges (and were dependent on interior forest) were more likely to be habitat specialists of high conservation concern, while species attracted to edges were more likely to be common generalist species.

⁵ Matlack, G.R. and J.A. Litvaitis. 1999. Chapter 6: Forest edges. Pp 210- 227 in: Maintaining Biodiversity in Forested Ecosystems (M.L. Hunter Jr., ed.). Cambridge University Press, Cambridge, UK.

⁶ Hunter, M.L. Jr. 1999. Wildlife, Forests and Forestry: Principles of Managing Forests for Biological Diversity. Prentiss Hall, Inc., Englewood Cliffs, NJ.

⁷ Pfeifer, M. et al. 2017. Creation of forest edges has a global impact on forest vertebrates. Nature 551: 187-191.

- *“In summary, the NECEC Project will create a swath of permanently maintained scrub-shrub habitat in an area with a scarcity of such habitat, and characterized by a patchwork of clearcuts, and young and older tree (primarily softwood) regrowth. The inclusion of scrub-shrub habitat within the larger landscape, while it will advantage some plant and animal species over others, will not adversely impact overall habitat and species diversity, and may improve it.”* (Mirabile p. 13-14)

The idea that clearing one of the largest permanent fragmenting features through a region that is globally significant because of its high level of ecological connectivity⁸ would improve overall habitat and species diversity is, to be blunt, ridiculous, and is contradicted by the extensive scientific literature on the adverse impacts of fragmentation.

There is not a scarcity of early successional habitat in the western Maine Mountains region, and the Applicant provides no evidence or analysis to support this statement. The state’s Wildlife Conservation Plan makes clear in multiple places that the type of habitat that would be maintained in the corridor (classified as Grassland-Shrubland-Early Successional) is limited in southern Maine where timber harvesting is limited and most forest is in a more mature condition. In contrast, it is mature forest that is limiting in the forests of northern and western Maine that are dominated by large actively managed commercial ownerships.

Data derived from the US Forest Service Forest Inventory and Analysis shows that over one-third of the forest in the vicinity of the new corridor consists of seedling and sapling stands (reflecting the high level of timber harvesting in the region) while less than 8% consists of sawtimber stands more than 100 years old (supporting the Wildlife Action Plan contention that

⁸ See pre-filed testimony of David Publicover, Janet McMahon (Group 1), and Rob Wood/Andy Cutko/Bryan Emerson (Group 6).

mature forest habitat is scarce in northern Maine).⁹ However, neither the Applicant nor their witnesses' testimony provide any assessment of the project's impact on mature forest habitat.

The Applicant wants to have it both ways – the project will not have a significant fragmenting impact because the region is already subject to heavy timber harvesting, but will provide a benefit through the maintenance of early successional habitat (which is already common in the region).

- *“According to the EPA ‘the IVM approach can create natural, diverse, and sustaining ecosystems, such as a meadow transition habitat. These transition landscapes, in turn, reduce wildlife habitat fragmentation and allow species to be geographically diverse, remaining in areas from which they might otherwise be excluded. A variety of wildlife species (including threatened and endangered species) consider these habitats home, such as butterflies, songbirds, small mammals, and deer. These habitats also encourage the growth of native plant species and can increase plant diversity.’”* (Goodwin p. 17)

Mr. Goodwin quotes the EPA¹⁰ in support of the habitat benefits of the new corridor. However, he conveniently excludes the opening sentences of this paragraph from the EPA web page, which read, *“While vegetation management on ROW is essential for providing safe and reliable electric power, these ROW also provide important wildlife habitats. As wildlife habitats in the United States are lost to development, these ROW become increasingly important.”*

(emphasis added)

⁹ These figures were derived from the USFS FIA Evaluator web site. They reflect FIA plots within an 18-mile radius of the approximate center of the new corridor between the Canadian border and Route 201 about 1 mile east of Whipple Pond. Because of the relatively small area these figures have a high margin of error but reflect the relative proportions of these types of habitats.

¹⁰ <https://www.epa.gov/pepp/benefits-integrated-vegetation-management-ivm-rights-way#benefit>.


This excluded sentence, as well as the phrase that Mr. Goodwin did include (“*from which they might otherwise be excluded*”) make clear that the habitat benefits cited by the EPA are intended to refer to developed landscapes where natural habitat is being lost and is increasingly limited. In these landscapes transmission line corridors can provide habitat benefits. However, it is not applicable to the landscape through which the new corridor would pass, which is comprised of extensive relatively natural forest that is not being lost to development and from which species are not being excluded. In this landscape it is the corridor that will cause the loss of habitat for native species. This omission by Mr. Goodwin creates an inappropriate impression of habitat benefits that do not apply to this landscape.

Dated: 3/18/19

by: 
David Publicover

Date: 3-18-19

The above-named David Publicover did personally appear before me and made oath as to the truth of the foregoing rebuttal testimony.


Notary Public
My Commission Expires 4-19-22

DENISE M. HORNE
Notary Public - New Hampshire
My Commission Expires April 19, 2022